

## DTSC: P2 E-News

California Department of Toxic Substances Control (DTSC)  
Office of Pollution Prevention and Green Technology (OPPGT)

June 2008

### Welcome to P2 E-News!

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### Green Chemistry Options for the State of California

The Green Chemistry Initiative Science Advisory Panel (Panel) completed its report on advancing green chemistry in California in May of 2008. DTSC Director Maureen Gorsen created the Panel in the fall of 2007 to assist her in identifying and considering green chemistry policy options as a part of the Green Chemistry Initiative. The Panel's work was supported by DTSC Chief Scientist Dr. Jeff Wong, Kathy Barwick, Cathy Cooke, and facilitator Robert Emerson of Leading Resources, Inc. The Panel presented Director Gorsen with 38 options to advance green chemistry. The Panel was not constituted to represent the interests of the full array of stakeholders in chemicals policy; however, it did bring together significant expertise from diverse points of view and succeeded in agreeing to advance this final report.

The result is a collection of options that have been proposed by one or more individuals on the Panel. While many of these options enjoy broad support among the panel members, the degree of support for any single option is neither stated nor implied. The framework put forward by the Panel outlines the need to affect the behavior of a broad range of actors along three fundamental dimensions to bring about the adoption of green chemistry practices in California: willingness, opportunity/motivation, and capacity.

The Panel believes that California can motivate new investment and innovation in green chemistry by addressing existing data, safety, and technology gaps. This will be accomplished through a variety of strategies that affect both the supply of, and demand for, green chemistry (and associated processes, technologies, and approaches). Supply-side options - including initiatives in education and research and economic incentives - help to facilitate innovation in green chemistry as applied to products, processes, and technologies. Demand-side options help to inform the marketplace and promote acceptance of these products, processes, and technologies through economic and regulatory policy. Together, these supply and demand strategies are intended to provide California with a broad range of options from which to formulate a comprehensive green chemistry policy.

The "text only" version of the report is available at:

<http://www.dtsc.ca.gov/PollutionPrevention/GreenChemistryInitiative/index.cfm>

Contact Kathy Barwick at (916) 323-3381 or [KBarwick@dtsc.ca.gov](mailto:KBarwick@dtsc.ca.gov)

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**William McDonough in Vanity Fair  
Architecture  
Industrial Revolution, Take Two**

Vanity Fair interviewed William McDonough, co-author of the book "Cradle to Cradle," published in 2002. The book is about "remaking the way we make things." Cradle to Cradle "does not just reduce waste, it eliminates the concept of waste."

"I have been plowing this row for 30 years," says McDonough. "The work all of a sudden is coming to fruition, and it's a great moment in our culture, where these kinds of ideas are now being addressed by corporations, by agencies. I like to say there is a strong current interest in the leadership of our species in issues of sustainability, and I think we have about 20 years to fix this problem."

<http://www.vanityfair.com/culture/features/2008/05/mcdonough200805?printable=true&Page=all>

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## **John Warner, Ph.D. on National Public Radio Chair of the Green Chemistry Science Advisory Panel**

After establishing the world's first Green Chemistry Ph.D. program, Warner now directs the Warner Babcock Institute for Green Chemistry, a large research group, working on a diverse set of projects involving green chemistry using principles of crystal engineering, molecular recognition and self-assembly. He is the editor of the Journal "Green Chemistry Letters and Reviews." He was awarded the American Institute of Chemistry's Northeast Division's Distinguished Chemist of the Year for 2002, and the Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring in 2005. His recent patents in the fields of semiconductor design, biodegradable plastics, personal care products and polymeric photo resist films are examples of how green chemistry principles can be immediately incorporated into commercially relevant applications. Warner is co-author of "Green Chemistry: Theory and Practice."

You can listen to Dr. Warner for his essay "This I Believe" as heard on National Public Radio. Dr. Warner, a one-time rock musician, encourages young people to express their creativity by studying science.

<http://www.npr.org/templates/story/story.php?storyId=88674284>

## **New Plastics Hazards Reduction Unit**

DTSC's Plastics Hazards Reduction Unit in the Office of Pollution Prevention and Green Technology operates under an interagency agreement with the Department of Conservation to:

- (1) reduce the life cycle environmental impacts of plastic beverage containers, and
- (2) increase the recycling of beverage container plastics.

The plastic garbage buildup in the oceans and toxic ingredients used in plastics are important concerns that drive this project. The interagency agreement received approval on January 24, 2008 and extends to November 30, 2011. This agreement funds nine new staff positions at DTSC.

The unit will work with industry and other stakeholders to identify and implement environmental improvements for plastic beverage containers. Specific deliverables include: (1) developing scientific research contracts, (2) performing Life Cycle Assessments, (3) identifying opportunities for reducing toxics in plastics, and  
(4) developing market assessment, market feasibility, and market commercialization contracts.

Contact John Hart at (916) 445-2926 or [jhart1@dtsc.ca.gov](mailto:jhart1@dtsc.ca.gov).

### **Senate Bill 14 News**

The 1989 Hazardous Waste Source Reduction and Management Review Act (Roberti), Senate Bill 14, requires hazardous waste generators to seriously consider source reduction as the preferred method of managing hazardous waste. If you routinely generated more than 12,000 kilograms of hazardous waste or 12 kilograms of extremely hazardous waste in 2006, you are required to do source reduction planning.

The 2006 Senate Bill 14 data shows that the top ten industry sectors generating manifested Category B hazardous wastes are: refineries (27%), plating (15%), semiconductors (14%), electric services (11%), aircraft parts and equipment (10%), pharmaceutical preparations (7%), soaps and detergents (7%), combination utilities (3%), blast furnaces and steel mills (3%), and repair services (3%). This represents 64.5 % of all the industry sectors manifested hazardous waste generated. 1681 facilities have submitted their 2006 Summary Progress Reports to date. About 180 facilities have not yet submitted their Summary Progress Reports. Staff expects to bring these remaining generators to compliance by September 1, 2008. Additional information on Senate Bill 14 is available on the website.

<http://www.dtsc.ca.gov/PollutionPrevention/SB14/SB14SourceReduction.cfm>

Contact Diana Phelps at (916)327-1190 or [DPhelps@dtsc.ca.gov](mailto:DPhelps@dtsc.ca.gov)

### **Change in Date: 2008 Western Regional Pollution Prevention Network Conference**

The 2008 Western Regional Pollution Prevention Network (WRPPN) Conference will now be held October 22-24, 2008 at the Monterey Hyatt instead of October 8-10, 2008. Approximately 200 pollution prevention innovators are expected from California, and U.S. Region 9. Conference participants will include representatives from local, state, and federal agencies, businesses, and non-governmental organizations. There will be eighteen technical and six training sessions ranging from Safer Alternatives to Copper Antifouling Coatings for Pleasure Craft, Storm Water and P2, Making the Dollar Case for Sustainability, Triple Bottom Line Applications of Green Chemistry Principles, to Stewardship and Take It Back Programs. The conference will also include an evening with the improvisational group "Um...Gee...Um," a non-profit performing troupe, that will entertain, tickle the imagination, and celebrate the spontaneity around an environmental theme. To check the full Conference agenda and get updates, go to <http://www.wrppn.org/>

Contact Robert Ludwig, (916) 324-2659 or [rludwig@dtsc.ca.gov](mailto:rludwig@dtsc.ca.gov)

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### **First National Pharmaceutical Product Stewardship Dialogue Meeting**

The Product Stewardship Institute is pleased to invite you to attend the first national Pharmaceutical Product Stewardship Dialogue Meeting to be held in Sacramento, California on June 19-20, 2008. The Product Stewardship Institute will hold this meeting in partnership with the California Integrated Waste Management Board at the Joe Serna Jr. Cal/EPA Headquarters Building in downtown Sacramento at 1001 I Street. If you are planning to attend the meeting, considering attending the meeting, or will participate by phone, please register via the project page at:

<http://www.productstewardship.us/PharmaceuticalMeetingSacramentoCA>.

The Draft Product Stewardship Action Plan for Unwanted/Waste Pharmaceuticals should be available for your review online before the meeting. Plan comments and revisions will be accepted through July 7, 2008. The Draft Action Plan describes and outlines key issues and potential solutions from interviews and other research.

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### **Assembly Bill 1681 - the Lead-Containing Jewelry Law**

Assembly Bill 1681 limits the amount of lead that jewelry, including children's jewelry and body piercing jewelry, may contain. Recently, high levels of lead have been found in jewelry, especially inexpensive children's jewelry. Lead exposure can cause serious health effects ranging from behavioral problems and learning disabilities to organ failure, and even death. Children six years old and under are especially at risk because their bodies are growing quickly.

Public awareness of lead's hazards has been heightened after the recalls of lead-contaminated jewelry sold in discount stores, gift shops, and vending machines, and the recent death of a four year old child in Minnesota who had swallowed a jewelry charm containing lead. The Department of Toxic Substances Control sent informational postcards to jewelry-related businesses, printed 300,000 informational flyers, and coordinated with the State Board of Equalization (BoE) to mail notices about the law to approximately 500,000 sales tax filers in the State.

Late in 2007, the Department of Toxic Substances purchased hundreds of items of children's jewelry from a variety of retailers across California. More than a third of the samples tested contained higher levels of lead than the law allows. One Oakland vending machine children's pendant contained 368,000 parts per million

of lead - 613 times the allowable limit. DTSC's outreach and enforcement efforts are beginning to pay off. People who sell jewelry are asking their suppliers for assurance that the jewelry and components they provide contain only materials that comply with California's law. <http://www.dtsc.ca.gov/LeadInJewelry.cfm>

Contact Andre Algazi at (916) 324-3114 or [aalgazi@dtsc.ca.gov](mailto:aalgazi@dtsc.ca.gov)

### **Humboldt State's New Green Lab Ready for Action**

The GreenLab is Humboldt State's newest chartered research institute and is officially known as the Green Product Design and Development Laboratory. It grew out of a partnership between the Department of Applied Technology, the John Ash Group, and the University's Office for Economic and Community Development. Maggie Gainer, the Office Director, says, "The GreenLab adds a new dimension to Humboldt State University's impact on the region's economy - innovation of green technologies and environmentally sustainable products." A unique partnership between Humboldt State and the environmentally conscious business community is emerging.

<http://www.ens-newswire.com/ens/apr2008/2008-04-11-093.asp>

### **Web-Based Environmental Compliance Tool Available for Colleges/Universities**

EPA has created a new web-based center that provides environmental compliance assistance and pollution prevention information to colleges and universities: <http://www.campuserc.org> If you go to the link, click on Resources at the top and then click tools and calculators. The National Association of College and University Business Officers developed the Campus Environmental Resource Center with support and funding from EPA.

The website makes it easier for school officials to learn about applicable environmental regulations to ensure a safe and sustainable environment for their students, faculty, and staff. The online center provides information on waste management, air pollution control, water resources, and drinking water safety, as well as public safety. Users can determine what campus activities are regulated by EPA, see how best to comply with environmental regulations, query federal enforcement and compliance data, and e-mail comments to EPA on regulations under development.

## **Vetrazzo - Transforming Recycled Glass into Exquisite Surfaces Since 1996**

Vetrazzo is a manufacturer of countertops using recycled glass. "The product was invented in 1996 in Berkeley, California - back when "green" was just a color. A glass scientist working on his Ph.D. and driven by his passion for the environment, got the idea to recapture the inherent beauty of recycled glass by transforming it into a functionally superior building material. He teamed up with a Bay Area architect and they formed a partnership to produce Vetrazzo in small, hand-made batches for the local building community. Word got out about this stunning, innovative material and soon orders were coming from far away places like the Ritz Carlton hotel in Miami South Beach." The production of Vetrazzo could not keep up with demand.

Then, ten years later, an enthusiastic Vetrazzo customer saw an opportunity to help bring sustainability to the surfacing market in a much bigger way. Armed with a passion for her countertop, keen business sense, and a large Rolodex, she set out. It wasn't long before a new management team was formed, capital was raised and a new company was built around the wildly successful Vetrazzo product. In October 2006, Vetrazzo, LLC opened the doors on a brand new, state-of-the-art manufacturing facility inside a recycled Ford auto plant on the Bay in Richmond, California that uses the natural lighting designed in 1934. The new era kicked off with the shipment of the plant's first Vetrazzo panel to actor and environmental activist Ed Begley, Jr. for installation on the nationally televised show, "Living with Ed". For more information, go to <http://www.vetrazzo.com/>

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## **Breast cancer and exposure to hormonally active chemicals: An appraisal of the scientific evidence**

Breast cancer and exposure to hormonally active chemicals: An appraisal of the scientific evidence (2008). This report by United Kingdom researchers summarizes the evidence for the link between breast cancer and environmental influences. Exposure to hormone-disruptive chemicals, such as hormone replacement therapy drugs, is thought to be a key factor, but there are other relevant chemicals found in the environment, such as pesticides and phthalates (widely used in consumer products, such as plastics). Individually, these may not cause breast cancer, but there is scientific concern about the 'cocktail effect', where exposure to a combination of these chemicals may interact with hormones to trigger cancer. View or download at

[http://www.chemicalshealthmonitor.org/IMG/pdf/Breast\\_cancer\\_and\\_exposure\\_to\\_hormonally\\_active\\_chemicals.pdf](http://www.chemicalshealthmonitor.org/IMG/pdf/Breast_cancer_and_exposure_to_hormonally_active_chemicals.pdf)

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## **Mercury Tooth Fillings: FDA Does an About Face**

Newsweek

Posted Tuesday, June 10, 2008 5:30 PM

In a legal settlement signed last week, the U.S. Food and Drug Administration has changed the information on its Web site

<http://www.fda.gov/cdrh/consumer/amalgams.html> about amalgam fillings to say that they "may have neurotoxic effects on the nervous systems of developing children and fetus," and that pregnant women "should not avoid seeking dental care, but should discuss options with their health practitioner." Previously, there was no such warning. The FDA also agreed to decide by next year whether mercury fillings need more regulation.

<http://www.blog.newsweek.com/blogs/labnotes/archive/2008/06/10/mercury-tooth-fillings-fda-does-an-about-face.aspx>

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## **"Green", "Natural", or "Organic" Cosmetics?**

In Volume 86, Number 19 of the Chemical & Engineering News, two articles focus on the confusion surrounding the labeling/certification of cosmetic products as "green", "natural" or "organic". The first article, Seeking Sustainability (<http://pubs.acs.org/cen/coverstory/86/8619cover.html>), describes the recent increase of new personal care products touted as natural, organic, or sustainable. However, just what these terms mean is not clear. The article also discusses the various labeling/certification programs that industry groups and certification bodies offer ingredient makers and formulators to authenticate their claims.

The second article, "Sorting Through The Confusion In Personal Care Certification" (<http://pubs.acs.org/cen/coverstory/86/8619cover2.html>), describes a current lawsuit brought by Dr. Bronner's Magic Soaps against Jason Natural Cosmetics and Estée Lauder, along with Stella McCartney's Care and two standards certification organizations, Oasis and Ecocert. The article highlights the differences in the definition of "organic" between certification groups.

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## **States ERP Consortium: A partnership of states for environmental results**

The States ERP Consortium was formed in 2006 to promote the Environmental Results Program (ERP). ERP is an integrated approach to addressing environmental problems associated with various business sectors that involves compliance assistance, facility self-certification, and statistically based performance assessment. While ERP has been used for business sectors having large numbers of small facilities, it is equally suited for use with larger facilities.

The primary goals of the States ERP Consortium are to:



Share information and tools among states to help with ERP implementation;  
Expand support for ERP within states and EPA;  
Report and communicate ERP results to key audiences;  
Identify potential new applications for ERP; and  
Identify strategies to accelerate and achieve economies of scale in automating ERPs.

<http://www.erpstates.org/>

## **Institute for Research and Technical Assistance to Complete Auto Body Project**

The Institute for Research and Technical Assistance conducted a Cal/EPA Department of Toxic Substances Control project on the auto body industry. They demonstrated that very low VOC and low toxicity alternative thinners and cleanup materials can be used with the solvent-borne coatings used by the industry. They worked with auto body shops to estimate the performance and cost of the alternative water-based coatings. The results indicate that the coatings take longer to dry but they perform very well, perhaps better than the solvent-borne base coats used for many years. The cost of the alternative coatings is comparable or somewhat higher than the cost of using the solvent-borne base coats. They also tested a dust control technology developed by a company called Mirka with three auto body shops. This technology is an alternative sanding material used with a vacuum that minimizes particulate emissions. It reduces worker exposure, reduces particulate matter emissions, prevents the dust which may be classified as hazardous waste from being disposed of improperly, and prevents the dust from entering the storm water. Virtually all technicians who use the alternative sanding discs prefer them over the traditional sanding discs.

The South Coast Air Quality Management District (SCAQMD) adopted a regulation that requires auto body facilities to convert to low-VOC base or color coats by July 2008. The San Joaquin Valley Air Pollution Control District adopted a regulation requiring the conversion. Other air districts are expected to adopt similar regulations over the next few years. Water-based base coats have been used in Europe for several years and the coating suppliers have adopted or modified the European coatings and are in the process of converting the industry.

The final project report should be completed in July. Two case studies can be found in the Institute for Research and Technical Assistance quarterly "Alternative" newsletter <http://www.irta.us/> More case studies will be printed in the July newsletter. For more information, contact Katy Wolf at IRTA at (818) 244-0300.

**California Emerging Clean Energy Technology Forum....includes  
discussion on hybrid trucks and plug-in hybrids**

July 9, 2008 from 8:30 am to 5:30 pm

UC Merced

Sponsored by US EPA, Cal EPA, Valley Air District, South Coast Air District

See details on the Kenneth L. Maddy Institute website

<http://www.maddyinstitute.org/>

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Pollution Prevention (P2) - Changing the way we think and act so we can reduce  
or eliminate the creation of waste and pollution.

That's all for this month, folks!

P2 E-News, Volume 3, Number 2

June 2008

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please go to <http://www.dtsc.ca.gov/PollutionPrevention/index.cfm> .